

WE CLAIM:

1. A hose control system comprising:
  - a flow controller including an inlet, an outlet, a fluid flow path defined between the inlet and outlet, and an electrically actuated valve positioned to selectively close the fluid flow path;
  - a hose reel device in fluid communication with the outlet of the flow controller, the hose reel device comprising a rotatable drum onto which a hose can be spooled, and an electrical motor connected to rotate the drum;
  - electronic components in communication with said valve and said motor, the electronic components comprising a wireless receiver configured to receive wireless command signals for controlling the valve and the motor, the electronic components configured to convey electrical power to drive the valve and the motor; and
  - a remote control comprising manual controls and a wireless transmitter, the wireless transmitter configured to transmit command signals to the wireless receiver for controlling the valve and the motor, the manual controls connected to the wireless transmitter to permit control of the wireless transmitter.
2. The hose control system of Claim 1, wherein the wireless receiver is integrated with the flow controller.
3. The hose control system of Claim 1, wherein the electronic components include integrated circuit (IC) chips.
4. The hose control system of Claim 1, wherein the wireless receiver is a radio frequency (RF) receiver.
5. The hose control system of Claim 1, wherein the electronic components further comprise an electronic logic unit configured to receive the wireless command signals from the wireless receiver and process said command signals to control the valve and the motor.
6. The hose control system of Claim 5, wherein the logic unit comprises an IC decoder unit.
7. The hose control system of Claim 1, wherein the electronic components are configured to position the valve at any of a plurality of positions between a completely closed

position in which the fluid flow path is completely closed and a completely open position in which the fluid flow path is completely open.

8. The hose control system of Claim 1, wherein the inlet of the flow controller is configured to mate with an outlet of a water faucet, the outlet being configured to mate with a hose.

9. The hose control system of Claim 1, wherein the inlet and the outlet of the flow controller are configured to mate with ends of hose sections.

10. The hose control system of Claim 1, further comprising a hose having a proximal end in fluid connection with the outlet of the flow controller, the remote control being mounted proximate a distal end of the hose.

11. The hose control system of Claim 1, wherein the hose reel device and the flow controller are positioned within a common housing.

12. The hose control system of Claim 1, wherein the manual controls of the remote control comprise one or more motor controls for transmitting command signals to the wireless receiver for controlling the motor, and one or more valve controls for transmitting command signals to the wireless receiver for controlling the valve.

13. A hose control system, comprising:

- a flow controller having an inlet, an outlet, a fluid flow path defined between the inlet and outlet, and an electrically actuated valve positioned to selectively close the fluid flow path;

- a rotatable hose reel drum onto which a hose can be spooled;

- an electrically controllable motor connected to rotate the drum;

- electronic components in communication with said valve and said motor; and

- a remote control configured to transmit wireless command signals to the electronic components for controlling the valve and the motor.

14. A hose control system, comprising:

- a flow controller having an inlet, an outlet, a fluid flow path defined between the inlet and outlet, and a valve positioned to selectively close the fluid flow path, the inlet being configured to mate with a residential water faucet, the outlet being configured to mate with a water hose;

a rotatable hose reel drum onto which a hose can be spooled;  
a motor connected to rotate the drum;  
a receiver configured to receive wireless command signals for controlling the valve and the motor; and

a remote control configured to transmit wireless command signals to the receiver for controlling the valve and the motor.

15. A power savings system comprising:

a wireless receiver configured to receive wireless signals for controlling at least one of an electrical motor driving rotation of a hose reel and an electrically actuated valve controlling a fluid flow through a hose system, the wireless receiver being capable of receiving the wireless signals only when the wireless receiver is in a powered state;

a power control unit configured to repeatedly switch the wireless receiver between powered and unpowered states in a cycle.

16. The power savings system of Claim 15, wherein the power control unit keeps the wireless receiver in its powered state between about 2-20% of the time of the cycle.

17. The power savings system of Claim 16, wherein the power control unit keeps the wireless receiver in its powered state between about 3-10% of the time of the cycle.

18. The power savings system of Claim 15, wherein the wireless receiver comprises a detection unit configured to detect and receive wireless command signals and an electronic logic unit configured to receive the command signals from the detection unit, the logic unit further configured to process said command signals to control at least one of the motor and the valve, wherein the power control unit is configured to keep the logic unit in an unpowered state until the wireless receiver receives a wireless signal.

19. The power savings system of Claim 15, wherein the power control unit comprises an operational amplifier.

20. The power savings system of Claim 15, wherein the wireless receiver comprises a radio frequency (RF) receiver.

21. The power savings system of Claim 15, wherein the power control unit is configured to keep the wireless receiver in its unpowered state for no more than a set time

period during each cycle, the system further comprising a remote control configured to transmit wireless command signals for controlling at least one of the motor and the valve, the remote control configured so that each signal is transmitted for a duration at least as long as said set time period.

22. A power savings system comprising:

a wireless receiver configured to receive wireless signals for controlling at least one of an electrical motor driving rotation of a hose reel and an electrically actuated valve controlling a fluid flow through a hose system, the wireless receiver being capable of receiving the wireless signals only when the wireless receiver is in a powered state;

a power control unit configured to reduce power consumption by applying an initial voltage to initiate movement of a mechanical device and then reducing the voltage to the mechanical device after the mechanical device begins moving and before the mechanical device is intended to stop.

23. The power saving system of Claim 22, wherein the mechanical device is the valve.

24. The power saving system of Claim 22, wherein the mechanical device is the motor.

25. A method comprising:

receiving a wireless valve command signal for controlling an electrically actuated valve, the valve positioned to selectively close a fluid flow path through a hose system;

positioning the valve in response to the wireless valve command signal;

receiving a wireless reel command signal for controlling an electrical motor connected to rotate a drum onto which hose can be spooled; and

activating the motor in response to the wireless reel command signal.

26. A method comprising:

transmitting a wireless valve command signal from a remote control to a wireless receiver;

controlling fluid flow through a hose system in accordance with the wireless valve command signal;

transmitting a wireless reel command signal from the remote control to the wireless receiver; and

controlling an electric motor in accordance with the wireless reel command signal, the motor connected to rotate a rotatable reel drum onto which hose can be spooled.

27. The method of Claim 26, wherein controlling fluid flow comprises controlling movement of an electrically actuated valve positioned to selectively close a fluid flow path through a hose system.

28. A method of conserving power in the detection of a wireless signal from a remote transmitter, comprising:

repeatedly switching a wireless receiver between powered and unpowered states in a cycle, the wireless receiver configured to receive wireless signals for controlling at least one of an electrical motor driving rotation of a hose reel and an electrically actuated valve controlling a fluid flow through a hose system, the wireless receiver being capable of receiving the wireless signals only when the wireless receiver is in its powered state; and

if the wireless receiver receives a wireless signal while in its powered state, ceasing to switch the wireless receiver to its unpowered state.

29. The method of Claim 28, further comprising keeping the wireless receiver in its powered state between about 2-20% of the time of the cycle.

30. The method of Claim 29, further comprising keeping the wireless receiver in its powered state between about 3-10% of the time of the cycle.

31. The method of Claim 28, further comprising:

keeping an electronic logic unit in an unpowered state, the electronic logic unit configured to receive command signals from the wireless receiver and process said signals to control at least one of the motor and the valve;

if the wireless receiver receives a wireless signal, switching the logic unit to a powered state.

32. The method of Claim 28, further comprising:

transmitting wireless command signals from a remote location to the wireless receiver, each signal being transmitted for a duration at least as long as a set time period; and

keeping the wireless receiver in its unpowered state for no more than said set time period during each cycle.

33. A power saving valve controller comprising:

a flow controller comprising an inlet, an outlet, a fluid flow path defined between the inlet and outlet, and an electrically actuated valve positioned to selectively close the fluid flow path; and

electronic components in communication with said flow controller, the electronic components comprising:

a wireless receiver configured to receive wireless command signals for controlling the valve; and

a power control unit configured to repeatedly switch the wireless receiver between powered and unpowered states in a cycle.

34. The power saving valve controller of Claim 33, further comprising an electronic logic unit configured to process said signals, wherein the power control unit is configured to keep the electronic logic unit in an unpowered state until the wireless receiver receives a wireless command signal, the power control unit configured to switch the electronic logic unit to a powered state after the receiver receives the wireless command signal.

35. A power saving valve controller comprising:

a flow controller comprising an inlet, an outlet, a fluid flow path defined between the inlet and outlet, and an electrically actuated valve positioned to selectively close the fluid flow path; and

electronic components in communication with said flow controller, the electronic components comprising:

a wireless receiver configured to receive wireless command signals for controlling the valve; and

a power control unit configured to reduce power consumption by applying an initial voltage to initiate movement of the valve and reducing the voltage to the valve after the valve begins moving but before movement of the valve is intended to stop.

36. A method of reducing the power consumed by a flow controller, said method comprising:

repeatedly switching on and off a receiver configured to receive wireless command signals for controlling an electrically actuated valve of the flow controller; and

if the receiver receives a wireless command signal, keeping the receiver on to allow the receiver to transmit the command signal to the electrically actuated valve.

37. A method of reducing the power consumed by a flow controller, said method comprising:

keeping an electronic logic unit in an unpowered state until a detection unit detects a wireless signal, the electronic logic unit configured to receive the signal from the detection unit and process said signal to control a valve in the flow controller; and

powering the electronic logic unit when the detection unit detects a wireless signal.

38. A method of reducing the power consumption of a system for controlling at least one of fluid flow in a hose system and a motor driving rotation of a reel drum for spooling a hose of the hose system, said method comprising:

applying an initial voltage to initiate movement of a mechanical device; and  
reducing said initial voltage after the mechanical device begins moving but before the mechanical device is instructed to stop moving.

39. The method of Claim 38, wherein the mechanical device is a valve positioned to selectively close a fluid flow path through the hose system.

40. The method of Claim 38, wherein the mechanical device is the motor driving rotation of the reel drum.